

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1-11. (Canceled)

12. (Currently Amended) An information processing method for reproducing AV stream data from a recording medium, comprising:

a reproducing step of reproducing one of a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit and a second table describing the relation of correspondence between arrival time stamp ~~derived from~~ from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet, from said recording medium, which has said first table or said second table recorded thereon depending on a recording method; and

a controlling step of controlling the outputting of said AV stream data based on the reproduced table.

13. (Currently Amended) A computer readable medium adapted to store a computer program ~~recording medium having recorded thereon a computer readable program~~ for an information processing apparatus recording AV stream data on a recording medium the computer program comprising: , said program including

a reproducing step of reproducing one of a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit and a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet, from said recording medium, which has said first table or said second table recorded thereon depending on a recording method; and

a controlling step of controlling the outputting of said AV stream data based on the reproduced table.

14. (Currently Amended) A computer readable medium adapted to store a computer program for ~~program for having a computer,~~ controlling an information processing apparatus recording AV stream data on a recording medium the program, comprising: , execute

a reproducing step of reproducing one of a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit and a second table describing the relation of correspondence between arrival time stamp derived ~~from~~ from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet, from said recording medium, having said first table or said second table recorded thereon depending on a recording method; and

a controlling step of controlling the outputting of said AV stream data based on the reproduced table.

15. (Currently Amended) ~~A~~An electronic medium encoded with data readable by a digital processor for controlling reproduction of said data, including: recording medium having recorded thereon

one of a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit; and

a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet, depending on a recording method.

16-27. (Canceled)

28. (Previously Presented) An information processing apparatus for recording AV stream data on a recording medium, comprising:

a controller for generating a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit, or a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet; and

a recorder for recording one of the first and second tables, as selected depending on a recording method, on said recording medium along with said AV stream data.

29.(Previously Presented) The information processing apparatus according to claim 28 wherein

said first table is EP_map; and wherein

said second table is TU_map.

30.(Previously Presented) The information processing apparatus according to claim 28 wherein

said controller selects said second table in case of non-cognizant recording.

31.(Previously Presented) The information processing apparatus according to claim 28 wherein

said controller selects said first table in case of self encoding recording.

32.(Previously Presented) The information processing apparatus according to claim 28 wherein

said controller selects said first table in case of cognizant recording.

33.(Previously Presented) The information processing apparatus according to claim 28 wherein said controller generates the identification information indicating which of said first and second tables have been recorded; said recorder memorizing said identification information.

34. (Previously Presented) The information processing apparatus according to claim 33 wherein said controller manages control so that,

if said first table is recorded along with said AV stream data,

said reproduction specifying information expresses the time information of the reproduction domain of said AV stream data on the presentation time basis, and so that,

if said second table is recorded along with said AV stream data,

said reproduction specifying information expresses the time information of the reproduction domain of said AV stream data on the arrival time basis.

35. (Previously Presented) An information processing method for recording AV stream data on a recording medium, comprising:

a generating step of generating a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit, or a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet; and

a recording step of recording one of the first and second tables, as selected depending on a recording method, on said recording medium along with said AV stream data.

36. (Currently Amended) A computer readable medium adapted to store a computer program ~~recording medium having recorded thereon a computer readable program~~ for an information processing apparatus recording AV stream data on a recording medium the program, comprising: ~~said program including~~

a step of generating a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit, or a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet; and

a recording step of recording one of the first and second tables, as selected depending on a recording method, on said recording medium along with said AV stream data.

37. (Currently Amended) A computer readable medium adapted to store a computer program ~~for program for having a computer~~, controlling an information processing apparatus recording AV stream data on a recording medium the program, comprising: ~~execute~~

a step of generating a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit, or a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet; and

a recording step of recording one of the first and second tables, as selected depending on a recording method, on said recording medium along with said AV stream data.

38.(Previously Presented) An information processing apparatus for reproducing AV stream data from a recording medium, comprising:

a reproducing unit for reproducing one of a first table describing the relation of correspondence between presentation time stamp and an address in said AV stream data of a corresponding access unit and a second table describing the relation of correspondence between arrival time stamp derived from the arrival time point of a transport packet and an address in said AV stream data of a corresponding transport packet, from said recording medium, which has said first table or said second table recorded thereon depending on a recording method; and

a control unit for controlling the outputting of said AV stream data based on the reproduced table.

39. (Previously Presented) Information processing apparatus for processing audio and/or picture information, comprising:

an input operable to input audio and/or picture information;

a controller operable to generate characteristic point information comprised of (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time unit map describing the

relationship between an arrival time stamp of a time unit and an address of a respective time unit in accordance with a type of said input audio and/or picture information; and an output operable to output the entry point map or the time unit map.

40. (Previously Presented) The apparatus of claim 39, further including a recorder operable to record said audio and/or picture information and the characteristic point information on a recording medium.

41. (Previously Presented) The apparatus of claim 40 wherein said controller generates the entry point map when the input audio and/or picture information is converted to self-encode stream format.

42. (Previously Presented) Information processing apparatus for processing audio and/or picture information, comprising:

an input operable to input audio and/or picture information;

a controller adapted to generate (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit and an address of a respective time unit; and

a recorder operable to record the audio and/or picture information and the entry point map or the time unit map on a recording medium.

43.(Previously Presented) The apparatus of claim 42, wherein said controller generates the time unit map when the entry point map cannot be prepared.

44. (Previously Presented) Information processing apparatus for recording input audio and/or picture information, comprising:

a controller operable to generate playlist information and map information corresponding to clip information, said clip information including said audio and/or picture information, said playlist information including at least one play item designated by an in-point and an out-point of the clip information, said map information including (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit and an address of a respective time unit; and

a recorder operable to store the playlist information, the map information and the clip information on a recording medium.

45. (Previously Presented) The apparatus of claim 44, wherein said controller generates the map information for each clip information.

46. (Previously Presented) The apparatus of claim 45, wherein said controller generates the map information of the same type for all clip information associated with one playlist.

47. (Previously Presented) A method for processing audio and/or picture information, comprising the steps of:

- inputting audio and/or picture information;
- generating characteristic point information comprised of (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit and an address of a respective time unit in accordance with a type of said input audio and/or picture information; and
- outputting the entry point map or the time unit map.

48. (Previously Presented) The method of claim 47, further including the step of recording said audio and/or picture information and the characteristic point information on a recording medium.

49. (Previously Presented) The method of claim 47 wherein the entry point map is generated when the input audio and/or picture information is converted to self-encode stream format.

50. (Previously Presented) A method for processing audio and/or picture information, comprising the steps of:

- inputting audio and/or picture information;
- generating (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time

unit map describing the relationship between an arrival time stamp of a time unit and an address of a respective time unit; and

recording the audio and/or picture information and the entry point map or the time unit map on a recording medium.

51. (Previously Presented) The method of claim 50, wherein the time unit map is generated when the entry point map cannot be prepared.

52. (Previously Presented) A method for recording input audio and/or picture information, comprising the steps of:

generating playlist information and map information corresponding to clip information, said clip information including said audio and/or picture information, said playlist information including at least one play item designated by an in-point and an out-point of the clip information, said map information including (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit and an address of a respective time unit; and

storing the playlist information, the map information and the clip information on a recording medium.

53. (Previously Presented) The method of claim 52, wherein the map information is generated for each clip information.

54. (Previously Presented) The method of claim 53, wherein the map information of the same type is generated for all clip information associated with one playlist.

55. (Previously Presented) Apparatus for reproducing audio and/or picture information comprising:

a reproducing device for reproducing from a storage medium audio and/or picture information and (i) an entry point map describing the relationship between a presentation time stamp of an entry point of said information and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit of said information and an address of a respective time unit in accordance with a type of said input audio and/or picture information;

a map recovery unit for recovering the entry point map or the time unit map from said storage medium; and

an audio and/or picture information reproducing unit for reproducing the audio and/or picture information associated with the recovered map.

56. (Previously Presented) The apparatus of claim 55, wherein the entry point map is stored on said storage medium when the audio and/or picture information is in a self-encode stream format.

57. (Currently Amended) An apparatus for reproducing audio and/or picture information, comprising:

a reproducing device for reproducing from a storage medium on which playlist information and map information corresponding to a stream file are stored ~~on which is stored playlist information and map information corresponding to clip information,~~

said ~~clip information~~ stream file including said audio and/or picture information, said playlist information including at least one PlayItem ~~play item~~ having IN time to indicate the presentation start time of PlayItem and OUT time to indicate the presentation end time of PlayItem ~~designated by an in point and an out point of the clip information,~~ said map information including (i) an entry point map describing the relationship between a presentation time stamp of an entry point of the ~~clip information~~ stream file and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit of the ~~clip information~~ stream file and an address of a respective time unit;

a playlist recovery unit for recovering the playlist information;

a map recovery unit for recovering the map information; and

a reproducing unit for reproducing the ~~clip information~~ stream file associated with the recovered map information.

58. (Currently Amended) The apparatus of claim 57 wherein respective map information is stored for each ~~clip information~~ stream file.

59. (Currently Amended) The apparatus of claim 58 wherein map information of the same type is stored for ~~all clip information~~ each stream file associated with one playlist.

60. (Previously Presented) A method for reproducing audio and/or picture information comprising the steps of:

reproducing from a storage medium audio and/or picture information and (i) an entry point map describing the relationship between a presentation time stamp of an entry point of said information and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit of said information and an address of a respective time unit in accordance with a type of said input audio and/or picture information;

recovering the entry point map or the time unit map from said storage medium;

and

reproducing the audio and/or picture information associated with the recovered map.

61. (Previously Presented) The method of claim 60, wherein the entry point map is stored on said storage medium when the audio and/or picture information is in a self-encode stream format.

62. (Currently Amended) A method for reproducing audio and/or picture information, comprising the steps of:

reproducing from a storage medium on which ~~is stored~~ playlist information and map information corresponding to ~~clip information~~ a stream file are stored,

said ~~clip information~~ stream file including said audio and/or picture information, said playlist information including at least one ~~play item~~ PlayItem having IN time to indicate the presentation start time of PlayItem and OUT time to indicate the presentation end time of the

~~PlayItem~~ designated by an in-point and an out-point of the clip information, said map information including (i) an entry point map describing the relationship between a presentation time stamp of an entry point of the ~~clip information~~stream file and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit of the ~~clip information~~stream file and an address of a respective time unit;

recovering the playlist information;

recovering the map information; and

reproducing the ~~clip information~~stream file associated with the recovered map information.

63. (Currently Amended) The method of claim 62 wherein respective map information is stored for each ~~clip information~~stream file.

64. (Currently Amended) The method of claim 63 wherein map information of the same type is stored for all ~~clip information~~each stream file associated with one playlist.

65. (Previously Presented) A record medium on which is recorded a computer program operable to control a processor to carry out the steps of claim 47.

66. (Previously Presented) A record medium on which is recorded a computer program operable to control a processor to carry out the steps of claim 50.

67. (Previously Presented) A record medium on which is recorded a computer program operable to control a processor to carry out the steps of claim 52.

68. (Previously Presented) A record medium on which is recorded a computer program operable to control a processor to carry out the steps of claim 60.

69. (Previously Presented) A record medium on which is recorded a computer program operable to control a processor to carry out the steps of claim 62.

70. (Currently Amended) A data providing medium encoded with data readable by a digital processor for controlling reproduction of said data, including: ~~record medium~~
~~adapted for use with a computer and having recorded thereon~~

an entry point map describing the relationship between a presentation time stamp of an entry point of audio and/or picture information recorded thereon and an address of a respective entry point, or a time unit map describing the relationship between an arrival time stamp of a time unit of said information and an address of a respective time unit in accordance with a type of said input audio and/or picture information.

71. (Currently Amended) A data providing medium encoded with data readable by a digital processor for controlling reproduction of said data, including: ~~record medium~~
~~adapted for use with a computer and having recorded thereon~~

playlist information and map information corresponding to ~~clip information a~~
stream file, said ~~clip information~~stream file including audio and/or picture information, said

playlist information including at least one ~~play item~~ PlayItem having IN time to indicate the presentation start time of PlayItem and OUT time to indicate the presentation end time of PlayItem ~~designated by an in-point and an out-point of the clip information~~, and said map information being (i) an entry point map describing the relationship between a presentation time stamp of an entry point and an address of a respective entry point, or (ii) a time unit map describing the relationship between an arrival time stamp of a time unit of the ~~clip~~ information stream file and an address of a respective time unit.

72. (New) The apparatus for reproducing according to claim 57, comprising:
a reproducing device for reproducing the map file from the stream file.

73. (New) The method for reproducing according to claim 62, comprising:
reproducing the map file from the stream file.

74. (New) The data providing medium encoded with data readable by a digital processor for controlling reproduction of said data according to claim 71, comprising:
reproducing the map file from the stream file.